

12. (Amended) The shuttle plasmid of claim 11, [wherein] further consisting of PacI restriction endonuclease sites [flank] flanking either end of the Ad sequences.
13. (Amended) The shuttle plasmid of claim 11, further [comprising] consisting of a multiple cloning site positioned between 1 and 9.2 map units.
14. (Amended) The shuttle plasmid of claim 11, [wherein the shuttle plasmid] further [comprises] consisting of a sequence encoding a gene of interest.
15. (Amended) The shuttle plasmid of claim 11, further [comprising] consisting of a promoter, or other sequence used to drive expression from a transgene.
16. (Amended) A cloning system for generating recombinant adenovirus comprising:
- (a) an Ad backbone plasmid consisting [essentially] of an Ad genome lacking map units 0 to 9.2, wherein the numbering of the map units starts with the lefthand ITR and wherein the backbone plasmid lacks a loxP sequence, and
 - (b) a shuttle plasmid consisting [essentially] of Ad sequences from 0 to 1 map units and 9.2 to 16.1 map units of an Ad genome [wherein the shuttle plasmid lacks a loxP sequence].
17. (Amended) A host cell comprising:
- (a) an Ad backbone plasmid [comprising] consisting of an Ad genome lacking map units 0 to 9.2, wherein the numbering of the map units starts with the lefthand ITR [and wherein the backbone plasmid lacks a loxP sequence], and
 - (b) a shuttle plasmid [comprising] consisting of Ad sequences from 0 to 1 map units and 9.2 to 16.1 map units of an Ad genome [wherein the shuttle plasmid lacks a loxP sequence].

22. (Amended) A method for producing recombinant adenovirus comprising contacting a host cell with
- (a) an Ad backbone plasmid [comprising] consisting of an Ad genome lacking map units 0 to 9.2, wherein the numbering of the map units starts with the lefthand ITR [and wherein the backbone plasmid lacks a loxP sequence], and
- (b) a shuttle plasmid [comprising] consisting of Ad sequences from 0 to 1 map units and 9.2 to 16.1 map units of an Ad genome [wherein the shuttle plasmid lacks a loxP sequence].
25. (Amended) The method of claim 22, wherein the shuttle plasmid further [comprises] consists of a sequence encoding a gene of interest.
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26. (NEW) The shuttle plasmid of claim 11, wherein any or all open reading frames constituting E4 have been modified in the backbone plasmid.
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27. (NEW) The shuttle plasmid of claim 26, wherein the modification is a substitution, insertion, or deletion of one or more nucleotides.
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28. (NEW) The shuttle plasmid of claim 11, wherein E3 has been modified in the backbone plasmid.
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29. (NEW) The shuttle plasmid of claim 28, wherein the modification is a substitution, insertion, or deletion of one or more nucleotides.
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30. (NEW) The shuttle plasmid of claim 28 wherein E3 has been modified to contain a multiple cloning site.

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31.³² (NEW) The shuttle plasmid of claim ²⁹28, wherein one or more genes required for Herpes Simplex Virus (HSV) packaging and an HSV origin of replication have been placed within the E3 region.

32.³³ (NEW) The shuttle plasmid of claim 11, further consisting in the backbone plasmid HSV Amplicon sequences required for packaging and replication.

33.³⁴ (NEW) The shuttle plasmid of claim 11, further consisting in the backbone plasmid one or more sequences that allow for integration of sequences into cells after viral infection.

34.³⁵ (NEW) The shuttle plasmid of claim 16, further consisting of PacI restriction endonuclease sites flanking either end of the Ad sequences.

35.³⁶ (NEW) The shuttle plasmid of claim 16, further consisting of a multiple cloning site positioned between 1 and 9.2 map units.

36.³⁷ (NEW) The shuttle plasmid of claim 16, further consisting of a sequence encoding a gene of interest.

37.³⁸ (NEW) The shuttle plasmid of claim 16, further consisting of a promoter, or other sequence used to drive expression from a transgene.

38.³⁹ (NEW) The host cell of claim 17, wherein the shuttle plasmid further consists of PacI restriction endonuclease sites flanking either end of the Ad sequences.

39.⁴⁰ (NEW) The host cell of claim 17, wherein the shuttle plasmid further consists of a multiple cloning site positioned between 1 and 9.2 map units.

40. ⁴¹ (NEW) The host cell of claim 17, wherein the shuttle plasmid further consists of a sequence encoding a gene of interest.
41. ⁴² (NEW) The host cell of claim 17, wherein the shuttle plasmid further consists of a promoter, or other sequence used to drive expression from a transgene.
42. ⁴³ (NEW) The host cell of claim 17, wherein any or all open reading frames constituting E4 have been modified in the backbone plasmid.
43. ⁴⁴ (NEW) The host cell of claim ⁴³ 42, wherein the modification is a substitution, insertion, or deletion of one or more nucleotides.
44. ⁴⁵ (NEW) The host cell of claim 17, wherein E3 has been modified in the backbone plasmid.
45. ⁴⁵ (NEW) The host cell of claim ⁴⁵ 44, wherein the modification is a substitution, insertion, or deletion of one or more nucleotides.
46. ⁴⁵ (NEW) The host cell of claim ⁴⁵ 44, wherein E3 has been modified to contain a multiple cloning site.
47. ⁴⁵ (NEW) The host cell of claim ⁴⁵ 44, wherein one or more genes required for Herpes Simplex Virus (HSV) packaging and an HSV origin of replication have been placed within the E3 region.
48. ⁴⁹ (NEW) The host cell of claim 17, further consisting in the backbone plasmid HSV Amplicon sequences required for packaging and replication.

49. ⁵⁰ (NEW) The host cell of claim 17, further consisting in the backbone plasmid one or more sequences that allow for integration of sequences into cells after viral infection.
50. ⁵¹ (NEW) The method of claim 22, wherein the shuttle plasmid further consists of PacI restriction endonuclease sites flanking either end of the Ad sequences.
51. ⁵² (NEW) The method of claim 22, wherein the shuttle plasmid further consists of a multiple cloning site positioned between 1 and 9.2 map units.
52. ⁵³ (NEW) The method of claim 22, wherein the shuttle plasmid further consists of a promoter, or other sequence used to drive expression from a transgene.
53. ⁵⁴ (NEW) The method of claim 22, wherein any or all open reading frames constituting E4 have been modified in the backbone plasmid.
54. ⁵⁴ (NEW) The method of claim 53, wherein the modification is a substitution, insertion, or deletion of one or more nucleotides.
55. ⁵⁶ (NEW) The method of claim 22, wherein E3 has been modified in the backbone plasmid.
56. ⁵⁶ (NEW) The method of claim 55, wherein the modification is a substitution, insertion, or deletion of one or more nucleotides.
57. ⁵⁶ (NEW) The method of claim 55, wherein E3 has been modified to contain a multiple cloning site.
58. ⁵⁶ (NEW) The method of claim 55, wherein one or more genes required for Herpes Simplex Virus (HSV) packaging and an HSV origin of replication have been placed within the E3 region.